

## Using industry standards to ensure compatibility

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**E**ase of connectivity to control and computer systems is an area of active product development at Bently Nevada. It is important that machinery management and protection systems properly integrate with plant control systems. They should also have the ability to integrate with existing information networks, information systems and computer platforms.

Our strategy is to adopt relevant industry-standards when they meet the following criteria:

1. They clearly improve the value to you.
2. They do not compromise the integrity of machinery protection.
3. They enhance the ability to deliver accurate and timely information for machinery management decisions.

The following four examples show how Bently Nevada supports widely-adopted industry standards.

### Microsoft® Windows™ and Windows NT software platforms

With the advent of Windows NT, many of the "mission critical" applications that require a multi-tasking, multi-user, networked environment no longer require special purpose operating systems and computer platforms. Now you can use Microsoft Windows' familiar and easy-to-use graphical user interface for the more robust applications found in many Bently Nevada software products. For example, our Trendmaster® 2000 for Windows System can now run on Microsoft Windows NT.

Compatibility and conformance to Windows and Windows NT standards helps ensure that computer hardware, monitors, printers, modems, network cards, and other peripherals that can be used with Windows and Windows NT are now compatible with Bently Nevada software. Microsoft is a leader in setting industry-standards for computing, software development and information exchange between software applications. By choosing to use Windows and Windows NT for Bently Nevada's software products, we have better access to these standards for incorporation into our products.

Our commitment to Microsoft Windows and Windows NT as the platform for our software products is extensive. Bently Nevada is a certified Microsoft development-level Solutions Provider. This level of commitment to understanding and adhering to relevant Microsoft standards helps ensure that your investment in Windows application software and Bently Nevada software will be protected as the products evolve. It also helps ensure that Bently Nevada products will be compatible with your other Windows-compatible application software. This ability to draw upon multiple applications, when solving problems, gives you a powerful advantage.

### Digital Modicon Modbus® protocol

Modicon Modbus is an industry standard protocol that allows digital communications between many devices made by different manufacturers. Modbus is a common method of connecting programmable logic controllers, distributed control systems, compressor surge con-

trollers, laboratory analyzers, and a host of other devices to allow communication and interaction with one another. Communication is generally via a single digital cable connection and is often considerably more cost-effective than numerous analog connections.

Our 3300 and new 3500 Machinery Monitoring Systems both provide a fully engineered serial data interface using the industry-standard Modbus protocol. This allows for single-cable connection to virtually all programmable logic controllers, distributed control systems, plant information systems, remote display devices, human-machine interfaces, and other instrumentation and computer systems. Our Trendmaster 2000 Software also provides Modbus connectivity.

### 4-20 mA proportional outputs

Many Bently Nevada products, such as our 3500, 3300, 1900, and 1800 systems, provide industry-standard 4-20 mA outputs of the monitored parameters. This provides a rudimentary level of connection to virtually all industrial process control systems, programmable controllers, data acquisition systems, recorders, and a host of other devices.

### Mounting Options

Many Bently Nevada products comply with DIN specifications for mounting, such as DIN rail compatibility or 19" rack mounting alternatives. These industry-standards allow the mounting of many of our products using standard control system cabinets, enclosures, and mounting hardware. This helps minimize the total installed costs of our equipment.

In addition, Bently Nevada maintains active participation in the development of standards related to our industry through such groups as the American Petroleum Institute (API), the International Society for Measurement and Control (ISA), and others. Our expertise, along with yours, allows us to help standardize "best practice" for machinery protection instrumentation, machinery information exchange, transducer mounting, etc. These standards allow all users access to practices and methodologies which are "best in class." ■